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|-------------------------------|------------------------|---------------------|--|
| <b>Notice of Allowability</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                               | 10/040,854             | WHIKEHART ET AL.    |  |
|                               | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                               | Charles Chow           | 2685                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8/4/2005.
2. ☒ The allowed claim(s) is/are 2-25.
3. ☒ The drawings filed on 12/28/2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

**Detailed Action*****Allowable Subject Matter***

1. The following is an examiner's statement of reasons for allowance:

Applicant has amended the objected dependent claim 11 to be the independent claim based on the previous office action, and canceled claims 1, 26-30.

Claims 2-25 are allowable over the prior art of record, the prior art fails to teach singly, particularly, or in combination, the subject matter, for the objected features, for the narrow band and spread spectrum communication for vehicle, having a signal processing circuit 104, [ circuit structure in Fig. 2], the signal processing circuit is operable to generate a spread spectrum-like signal in response to the narrow band signal, [ from narrow band demodulation 146 to input signal processor 112], and where the signal processing circuit is operable to generate an output communication signal in response to at least one of the spread spectrum-like signal and the input spread spectrum signal. An input signal processor connected to an input device and the antenna system, the input signal processor operable to generate an output spread spectrum in response to an input communication signal from the input device; an output signal processor connected to an output device and the antenna system, the output signal processor operable to generate the output communication signal in response to the input spread spectrum signal; and a narrow band receiver connected to the antenna system and the input signal processor, the narrow band receiver operable to provide the narrow band signal from the antenna system to the input processor, where the input signal processor is operable to generate a spread spectrum like signal in response to the narrow band signal; and where the output signal processor is operable to generate the output communication signal in response to the spread spectrum-like is signal [claim 11].

The dependent claims are also allowable due to their dependency upon the independent claims and the additional claimed features.

The closest prior art to **Dixon et al. (US 5,291,516)** teaches the dual mode receiver having mode switch 104 to select narrow band and spread spectrum incoming signal for demodulation [ Fig. 2, col. 5, line 49 to col. 6, line 11; col. 2, lines 47-68], but failing to teach the signal processing circuit connected to narrow band receiver for generating spectrum-like signal in response to the incoming narrow band signal, and output communication signal in response to at least one of the spread spectrum-like signal.

**Boesch (US 6,137,826)** teaches the generating output communication signal in response to FM-I, FM-Q and in response to the input spread spectrum signal DSSI-I, DSS-Q [col. 2, line 55 to col. 3, line 31; col. 4, lines 14-59], but failing to teach the the signal processing circuit connected to narrow band receiver for generating spectrum-like signal in response to the incoming narrow band signal, and output communication signal in response to at least one of the spread spectrum-like signal.

Other prior arts in below has been considered, but they fail to teach the above claimed features.

**Benedetto et al. (US 4,591,661)** teaches the antennas for receiving narrow band signal [Fig. 4] and antenna 20/26 for receiving/transmitting CDMA spread spectrum signal for the cordless telephone system [abstract, col. 2, line 57 to col. 3, line 55].

**Baranowski (US 2004/0029,541 A1)** teaches wireless telephone operating AM and FM signals, having CDMA IC 121 for spreading, de-spreading, CDMA signal [Fig. 1, 0001, 0008-0011, 0019, 0036, 0045].

**Higuchi (US 2003/0199,261 A1)** teaches a portable wireless terminal can access multiple frequency bands including CDMA spread spectrum communication [0015, 0006-0007].

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**Collier et al (US 5,073,899)** teaches the demodulator for providing audio and data output [Fig. 3, abstract, col. 3, lines 29-35].

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

**Conclusion**


2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles C. Chow whose telephone number is (571) 272-7889. The examiner can normally be reached on 8:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is (571) 272-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Charles Chow 

August, 12, 2005.

  
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